AQA

Please write clearly in block capitals.

Centre number | | | | | | Candidate number | | | | |

Surname _____

Forename(s) _____

Candidate signature _____
I declare this is my own work.

A-level
PHYSICAL EDUCATION

Paper 2 Factors affecting optimal performance in physical activity and sport

Time allowed: 2 hours

Materials
For this paper you may use:
- a calculator.

Instructions
- Use black ink or black ball-point pen. Pencil should only be used for drawing.
- Fill in the boxes at the top of this page.
- Answer **all** questions. You must answer the questions in the spaces provided. Do **not** write on blank pages.
- If you need extra space for your answer(s), use the lined pages at the end of this book. Write the question number against your answer(s).
- Do all rough work in this book. Cross through any work you do not want to be marked.

Information
- The marks for questions are shown in brackets.
- The maximum mark for this paper is 105.
- Questions should be answered in continuous prose. You will be assessed on your ability to:
  - use good English
  - organise information clearly
  - use specialist vocabulary where appropriate.

For Examiner's Use	
Section	Mark
A	
B	
C	
TOTAL	

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Section A

Exercise physiology and biomechanics

Answer **all** questions in this section.

Only **one** answer per question is allowed.

For each question completely fill in the circle alongside the appropriate answer.

CORRECT METHOD ⬬ WRONG METHODS

If you want to change your answer you must cross out your original answer as shown.

If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown.

0 1 Which **one** of the following is a definition of the term 'mass'?

[1 mark]

A The amount of space a body occupies ⬭

B The gravitational force exerted on an object ⬭

C The quantity of matter a body possesses ⬭

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0 2 **Figure 1** shows an athlete throwing a javelin.

Figure 1

Which lever system is operating at the elbow as the javelin is released during the execution of the throw?

[1 mark]

A First class ⬭

B Second class ⬭

C Third class ⬭

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0 3 . 1 The data gathered from a fitness test can be either quantitative or qualitative.

Define the terms quantitative **and** qualitative.

[2 marks]

Quantitative _____

_____

Qualitative _____

_____

0 3 . 2 State **two** factors that can affect the reliability of a fitness test.

[2 marks]

1 _____

_____

2 _____

_____

Do not write outside the box

0 4 The start of a 100 m sprint race requires athletes to accelerate as quickly as they can out of the blocks.

0 4 . 1 Acceleration is a vector quantity.

Define what is meant by a vector quantity.

[1 mark]

_____

_____

0 4 . 2 **Table 1** shows the velocity of a sprinter measured at 10 m intervals, as well as the split times for each 10 m segment of the race.

Table 1

Distance at end of 10 m split (m)	**10**	**20**	**30**	**40**	**50**
Split time (s)	2	1.5	0.9	0.8	0.8
Velocity at the end of the split (m/s)	4	10	11	12	12

Calculate the sprinter's acceleration between 10 and 20 m using the data in **Table 1**.

Give the correct units in your answer.

[2 marks]

Sprinter's acceleration _____ Units _____

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0 5 Evaluate the suitability of including high-intensity interval training (HIIT) in **either** a basketball **or** a netball team's training programme.

[3 marks]

Do not write outside the box

0 6 Elite-level rugby players are at high risk of suffering from musculo-skeletal injuries due to the physical nature of the sport.

Evaluate the use of screening to prevent musculo-skeletal injuries in elite rugby.

[8 marks]

You may use this space to plan your answer.

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Extra space

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Turn over ►

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0 7 Analyse how an athlete can maximise the distance a discus travels.

Use your knowledge of the factors affecting horizontal displacement of projectiles and the Bernoulli principle in your answer.

[15 marks]

You may use this space to plan your answer.

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Extra space

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Section B

Sport psychology

Answer **all** questions in this section.

0 8 ‘Interpersonal differences begin to be resolved and a sense of cohesion emerges’.

Which stage of Tuckman’s model is described in this statement?

[1 mark]

A Forming ⬭

B Norming ⬭

C Performing ⬭

D Storming ⬭

0 9 Which component of an attitude involves a person’s emotions?

[1 mark]

A Affective ⬭

B Behavioural ⬭

C Cognitive ⬭

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1 0 A performer's likelihood of success is influenced by them having a positive attitude.

Describe **four** factors which may lead to the formation of a positive attitude.

[4 marks]

1 _____

_____

2 _____

_____

3 _____

_____

4 _____

_____

1 1 Hollander's model is one example of an interactionist perspective of personality.

Explain how a coach can apply knowledge of Hollander's model of personality to improve performance. Refer to each level of the model in your answer.

[3 marks]

_____

_____

_____

_____

_____

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_____

_____

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1 2 Evaluate the impact of extrinsic rewards on a performer's motivation.

[3 marks]

Do not write outside the box

1 3 A badminton player is suffering from learned helplessness.

Analyse the strategies a coach could use to help the player overcome learned helplessness and improve their performance.

[8 marks]

You may use this space to plan your answer.

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Extra space

Do not write outside the box

Turn over ►

Do not write outside the box

1 4 An experienced women's rugby team is bottom of the league with only a few games left before the end of the season.

A new head coach is recruited and chooses to adopt an autocratic leadership style during training sessions and games.

Analyse the impact an autocratic leadership style may have on the team. Refer to Chelladurai's multi-dimensional model in your answer.

[15 marks]

You may use this space to plan your answer.

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Do not write outside the box

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35

Turn over ►

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Section C

Sport and society and technology in sport

Answer **all** questions in this section.

1 5 Which **one** of the following organisations provides support to **both** elite **and** participation level sport?

[1 mark]

A National Governing Bodies ⬭

B National Institutes of Sport ⬭

C UK Sport ⬭

1 6 Which **one** of the following would benefit most from taking beta blockers?

[1 mark]

A Golfer ⬭

B Marathon runner ⬭

C Rugby player ⬭

D Sprinter ⬭

1 7 Maintaining data integrity ensures the accuracy, consistency and completeness of data whilst it is collected, stored and shared.

State **three** ways that data integrity can be maintained.

[3 marks]

1 _____

_____

2 _____

_____

3 _____

_____

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1 8 . 1 Define the term 'negligence'.

[1 mark]

1 8 . 2 Give **three** examples of negligence by a rugby official.

[3 marks]

1

2

3

1 9 'The use of performance enhancing drugs should be allowed in sport.'

Evaluate this statement.

[3 marks]

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2 0 One football coach believes in the importance of winning fairly so encourages their players to demonstrate sportsmanship.

Another coach believes the win ethic is more important so encourages their players to use gamesmanship.

Evaluate these views in relation to professional football.

[8 marks]

You may use this space to plan your answer.

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2 1 Media coverage of professional tennis has increased over the past 20 years. Tennis players are increasingly required to interact with the media in the lead-up to matches.

Evaluate the impact the media may have on a professional tennis player's self-efficacy in an upcoming match.

Refer to Bandura's Model of self-efficacy in your answer.

[15 marks]

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END OF QUESTIONS

35

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ANSWER IN THE SPACES PROVIDED

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